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HISTORY

OF THE

ASIATIC CHOLERA IN PROVIDENCE.

BY E. M. SNOW, M. D.,

SUPERINTENDENT OF HEALTH.

[From the Providence Journal.] Dec. 31, 1857.

1832.

Epidemic or Asiatic Cholera, as the words are now used, is of comparatively recent origin. The same disease has existed in India for a long period, and there is good evidence that it has been known in different portions of Europe. A disease, supposed to be the same, prevailed in London in 1679, and in other parts of England and Scotland between 1748 and 1773. But, until recently, whenever the disease has been known, it has prevailed as an *endemic*; that is, it has been confined to restricted localities. It has never advanced from the place of its origin to other localities.

The first known appearance of the disease, as a traveling epidemic, was in the year 1817. In May of that year the Asiatic Cholera broke out with great virulence in the eastern portion of Hindostan, and, during that and the following years, it continued to spread east and west, until it had passed through China on the east, and, on the west had reached, in 1823, Astracan at the mouth of the river Volga in the south eastern part of Russia in Europe. This was the western limit of its progress at this time, and was the first appearance of the disease, as an epidemic, in Europe.

After an interval of six years, the disease again commenced its progress from India in 1829, and traveling over nearly the same course as in 1823, it reached the south eastern borders of European Russia in June, 1830. The season being favorable for its development, it continued its progress to the North, through Russia, and reached Moscow the last of September, 1830. The approach of winter checked the disease, and it was hoped that its progress might be stayed. There were, however, occasional cases in Moscow during the winter of 1830-31, and on the approach of spring, the disease advanced to the west and north, until it reached Warsaw in Poland in April, 1831, and St. Petersburg in May of the same year. During this year it also spread to Archangel in the extreme north of Russia where it prevailed with great severity.

At the same time, advancing to the south and west, the disease reached Berlin and Vienna in August, 1831. From Berlin it proceeded to Hamburg, and soon after appeared at Sunderland in the north of England, Octo-

ber 24th, 1831. It soon spread to Newcastle, and other places in the neighborhood. Here again the disease was checked by the cold weather, though the occurrence of cases during the winter proved that the epidemic influence was still present. The first cases in London and Glasgow were at about the same time in the first week of February, 1832. In March, 1832, the disease appeared at Calais, and at Paris and during this year it spread through the greater part of France.

From England, the Cholera crossed the ocean, and appeared at Quebec, June 8th, 1832; having been brought, as was supposed, in an emigrant vessel. This comparatively recent date, was the first known appearance of the disease on the continent of America. It reached Montreal on the 10th of June, two days after its appearance at Quebec, and reached Albany and New York on the first day of July. It made fearful ravages in Quebec, Montreal and New York, and soon spread throughout the cities and large villages of the country. It is not necessary to trace its progress in this country; but this brief sketch of its course from India seemed to be required for a full understanding of the subject, because, on the reappearance of the disease at two subsequent periods, it has followed very nearly the same route from India, through Europe, to this country.

The progress of the epidemic was by no means uniform. It sometimes passed over a considerable extent of country and broke out suddenly where it was not expected, afterwards retracing its steps, and prevailing in the places it had previously omitted. The disease has always been checked in its progress by cold weather, though in some instances, and under peculiar local circumstances, it has raged with considerable severity in the midst of winter.

With these exceptions the march of the epidemic has always been constantly forward; and by noting the dates of its appearance at different places on the route already described, from India to this country, the best idea can be obtained of its direction and progress.

The epidemic generally followed the most frequented routes of travel, probably not so much because of the

travel there, as because those routes are generally on low ground, near streams of water. One law of Cholera was very soon discovered, and has since been fully established, viz: That the prevalence of the disease is in inverse ratio to the elevation above the level of the sea, or of large rivers in the vicinity. The epidemic may follow large rivers into mountainous districts; but it will always be confined to the banks of these rivers. It has never prevailed, to any great extent, on land much elevated above large bodies or streams of water in the neighborhood.

The progress of the epidemic from east to west, through Europe from 1829 to 1833, was watched with great interest in this country, and at the period of its arrival in England, the hope was very generally entertained that the Atlantic ocean would arrest its westward march. The appearance of the disease at Quebec, June 8th, 1832, put an end to these delusive expectations, and the greatest excitement immediately arose throughout this country.

The legislative, executive, and ecclesiastical authorities in all our cities at once adopted measures with the view of preventing the epidemic. Unfortunately, in most of our cities, more confidence was placed upon quarantines, and upon fasting and prayer, than upon internas-sanitary measures. The absurd and inconsistent idea that Cholera was sent by God, and that, at the same time, its progress could be stopped by quarantine regulations seems to have prevailed at that period. In New York, Albany, Troy, Whitehall, and Burlington, the most severe restrictions were placed upon the intercourse with Canada, and all persons, and particularly foreign emigrants, were prohibited from entering those places from Canada.

Bishop Onderdonk, of New York, immediately issued a circular with the form of a prayer to be used, that the progress of the epidemic might be stayed.

At this period (June 1832) the Providence Journal was filled with exaggerated accounts of the disease, and with theories and prescriptions from men who thought they understood the whole subject though most of them had never seen a case of Cholera. A legion of quacks advertised a legion of new remedies, either as preventives or as certain cures. The public excitement, and the price of camphor rose to an unprecedented height. The Aldermen of Boston recommended, among other things, "a full trust and confidence in the *Preserver of Health and Author of Disease*;" a recommendation which, when applied to the Cholera and in the sense in which it was understood at that time, consists of about an equal compound of piety and blasphemy.

But neither ordinances, prescriptions, proclamations, nor prayers produced any visible effect. The Cholera broke out in Montreal two days after its appearance in Quebec and prevailed in both places with great severity.

On the 19th of June 1832, the physicians of Providence, at the call of Dr. Levi Wheaton, and by request of the Mayor, met at the Senate Chamber to consider the subject of Cholera. After a free discussion, Drs. Levi Wheaton, Mauran, and Webb were appointed a committee "to report such measures as they may deem expedient."

On the 21st of June, the Quarantine ordinance was put in force, and the daily papers were filled with accounts of the ravages of the diseases in Montreal and Quebec.

On the 25th of June the report of the Committee of Physicians appeared. The report contained excellent

advice to the people, in relation to food and dress, and deprecated excitement and panic. The recommendations to the city authorities were four, viz: 1. A strict quarantine upon vessels from infected places. 2. A thorough examination and removal of nuisances from streets, lanes, houses, and yards in the city. 3. To require the keepers of hotels, boarding houses &c. to report immediately all cases of sickness in their houses. 4. To provide hospitals for the sick.

The recommendations of the physicians were immediately adopted by the City Council, and an ordinance was passed June 29 1832, entitled "An Ordinance to prevent the introduction of the Asiatic Cholera into the City of Providence." This ordinance appropriated five thousand dollars to accomplish the object contemplated.

On the 27th of June, a proclamation appeared from the Governor appointing the fifth of July as a day of fasting and prayer, that the progress of the epidemic might be arrested. At this time the excitement was slightly allayed, and the hopes of the people were revived by the announcement that the disease was abating in Canada, and that no cases were known to exist in the United States.

The feeling of security was, however, of short duration. On the first day of July, 1832, the Cholera appeared simultaneously in New York, and Albany, and attained an alarming severity very soon after its commencement.

In Providence, the city authorities were active in their exertions to prevent the disease. The Quarantine regulations were rigidly enforced upon vessels and steamboats from New York; and, what was more important, there was a general examination for, and removal of nuisances throughout the city.

On the tenth of July, says the Providence Journal: "Drs. Tobey, Mauran, and Webb proceeded to New York, in the steamboat Franklin, to obtain such information relative to the treatment of the Cholera as might be advantageous to the city should that disease appear among us."

On their return to Providence, in the steamer President, on the fifteenth of July, they were forbidden to land in the city in consequence of a case of Cholera Morbus having occurred on the passage. They were under the necessity of landing in Seekonk, from which place they proceeded on the other side of the river to Pawtucket. They were refused admission into all the hotels and private houses on their route, until they reached Horton's Grove, where they were received and permitted to spend the night. The next day, after being famigated by order of the city authorities, they were permitted to return to their homes.

These gentlemen having been willing to go into the midst of the disease for the purpose of obtaining information, and being perfectly convinced that it was not contagious, and being satisfied that there was no danger of carrying the disease to their own families, were rightfully indignant at the treatment they met with on their return.

Their report was published, in pamphlet form, on the seventeenth of July, and passed through three editions in ten days. The report gave a brief sketch of the history of Cholera, and a full account of the observations of the gentlemen in New York. It showed that the disease was not contagious, that there was much needless and hurtful alarm upon the subject, and closed with excellent advice to the people with regard to dress, diet, and drinks. It discredited the use of preventives, so

called, as "among the most productive causes of ill health;" advised the people "to shun brandy as they would the pestilence itself," and warned all "against resorting to the reputed specifics." "The utmost cleanliness of persons and estates" was recommended and imperatively insisted upon. The four grand requisites for safety were stated to be:—"temperance, cleanliness, ventilation, and fearlessness." The closing sentence of the report was as follows:

"Finally be cheerful, prudent, and virtuous; if such be your life, you have little to dread from Cholera; but should it come among us, being thus prepared, and placing a firm reliance upon the goodness, the justice, the mercy of an all-wise and overruling Providence, we may confidently anticipate being enabled to pass through the trying ordeal and escape unscathed."

The advice given was of a highly judicious character, and would seem to have produced considerable effect in allaying the great excitement which prevailed.

In consequence of being forbidden to land passengers in the city, the New York steamboats discontinued their trips to Providence on the sixteenth of July, and afterwards landed their passengers at Seekonk, East Greenwich, Somerset and other places.

On the 18th of July, the City Council of Providence passed an ordinance entitled, "An Ordinance prohibiting all persons from New York, or any other city, town, or place infested with malignant Cholera, from entering into the city of Providence." Ten days absence from the infected place was required before coming into the city. Newport had previously passed a similar ordinance, and the example was followed by Wickford and other places. A few days later when the Cholera had appeared in Newport, the mail coach from Newport was stopped by the authorities of Fall River and forbidden to enter the town. These facts illustrate the extent of the panic which prevailed in this State.

The excitement had now continued for six weeks, and no case of the disease had occurred in the State. The Providence Journal of the 26th of July announced that the health of the city was excellent, and that the panic was subsiding. The authorities and the people were congratulating themselves that their severe restrictions upon the intercourse with New York had saved them from the epidemic. Their feeling of security, and their faith in Quarantines were soon to be destroyed. On the 25th of July, two persons died of Cholera in Newport, who had been detained for eight days at Quarantine on board a sloop from New York. Other cases immediately occurred in Newport, while other passengers in the same sloop, who had been landed on a neighboring island, entirely escaped the disease.

On the thirty-first day of July, Mrs. Joha Thurber and a small girl named Slocum, who lived in a house on Field street at Eddy's Point in Providence, were seized with the Cholera and died the next day, August 1st, 1832:—the first after a sickness of 22 hours, the second of 10 hours. The husband and another girl named Slocum were attacked at about the same time and died the next day. These were the first cases of Asiatic Cholera ever known in Providence. They were characterized by all the peculiar symptoms of the disease; the patients all died in a very brief space of time; and the announcement of their deaths immediately renewed the panic which had begun to subside.

On the 3d of August the physicians of the city "formed themselves into a medical board for the purpose of reporting all cases of Cholera"; and Drs. Webb, Hartshorn, Utley, Slack, and Tobey were appointed a com-

mittee "to investigate and report all the facts relating to the cases in the Thurber family." In announcing these cases, the Board of Health assured the public, that all cases of the disease should be reported in the newspapers, a promise which they seem to have faithfully kept.

The cases of Cholera in the Thurber family seem to have occurred in a manner calculated to banish all ideas of contagion, and to show the perfect inutilty of Quarantine regulations with reference to this disease. The committee appointed by the physicians made a thorough investigation of all the circumstances connected with the cases, and their report showed positively, that neither of the victims had had any intercourse, directly or indirectly, with any place where the Cholera was prevailing, or with any persons from such places. Neither could the committee discover any local cause for the disease. With our present knowledge of the subject, we should say that the cases proved simply that the Cholera atmosphere, if it may be so called, had reached the city, while there was probably some imprudence in eating, or some local influence undiscovered by the committee, which gave rise to the disease in these particular instances.

The city authorities continued their exertions in the removal of nuisances, and the adoption of measures supposed to be calculated to prevent the spread of the disease. On the 6th of August, Moses B. Ives, Esq., offered the building since known as the Tockwotton House, to the city, for a Cholera Hospital. The offer was accepted, and the building was immediately fitted up for that purpose, and provided with physicians and nurses.

There were no more cases of Cholera for two weeks. On the 16th of August a case was reported on Christian Hill which recovered. On the 26th of August two cases were reported, one a debtor in the Jail at Haymarket Square, the other a married woman on Eddy street, both of which died. These were the only cases in August, being seven in all, of which six died.

At this period it had become evident that the disease would not prevail here as it had in New York:—the panic had in a great measure subsided:—and the community began to call, with great earnestness, for the repeal of the unnecessary restrictions upon commerce and travel. The obnoxious ordinance was repealed on the 31st day of August, at which time the epidemic seemed to have nearly ceased in New York.

During the month of September, 1832, the weather was warm and the cases of Cholera in Providence increased. From the 1st of September to the ninth of October, there were 29 cases reported, making the whole number of cases in the city, during the year, 36, of which 25 died and 11 recovered. The cases were in different parts of the city, and with the exception of the first four cases in the Thurber family, there were no two cases in the same locality. No case occurred in the portion of the city east of North Main street and north of Power street; nor in the present territory of the Sixth Ward.

The number of cases in the different wards was as follows: First Ward, 6 cases; Second, 7; Third, 3; Fourth, 4; Fifth, 14; Sixth, 2: Total 31. On the east side of the river there were 16 cases, on the west side 20.

There was no registration of deaths in the city at that time, and it is impossible to give the age, sex, color, nativity and other particulars of those who died as would be desirable.

The fact that, except in one instance, no two cases occurred in the same locality, shows that the disease did not become epidemic in Providence; and compared with other places, this city may be said to have escaped the epidemic. The few cases that did occur, however, showed all the peculiar characteristics of the disease, some of them dying in a very few hours.

The escape of the city from the epidemic was undoubtedly owing to the efficient measures taken by the authorities for the removal of nuisances in the city. These measures were enforced with great energy, and the authorities at that time are deserving much praise for their action in this respect. Experience has shown that, for the prevention of Cholera, quarantine regulations are utterly useless. The action, therefore, of the authorities in the adoption of the stringent regulations prohibiting intercourse with other cities, was unwise and injurious. These regulations created a great excitement among the people, increased the panic in relation to the disease, and injured the reputation of the city in other places.

Among the anecdotes derogatory to the reputation of the City and State, the following from a Providence paper of that date, is highly characteristic of the celebrated Dr. Chapman of Philadelphia.

"RHODE ISLAND QUARANTINE.—'Well Doctor,' said a friend the other day to the eminent Dr. C. of Philadelphia, 'I hear that they have got the Cholera in Rhode Island, notwithstanding all their inhuman Quarantines.' 'No matter—no matter,' said the Doctor, 'it can't hurt them for they've got no bowels.'"

Still, the action of the authorities of Providence was in accordance with the prevailing opinions of the day, and criticism came with an ill grace from other cities where they attempted to enforce the same stringent regulations prohibiting intercourse with other places; and at the same time took no efficient measures for the removal of nuisances in their midst. In New York and some other cities they did nothing that should have been done; in Providence they did all they should have done, and something more. The result showed the action of this city was the wisest.

The Cholera, in this country in 1832, dissipated many of the absurd speculations, and groundless fears in relation to the disease which had been previously entertained.

While very little information was obtained concerning the treatment of the disease, very much was learned respecting its causes, and the means of its prevention, which will be noticed hereafter. The disease did not leave the country entirely; but continued, to a greater or less extent, in our Southern cities during the two following years, and in the summer of 1834, there was a large number of cases in New York, Philadelphia, and in most of our northern cities. I can find no account of any cases in Providence during that year.

1849.

After an interval of fifteen years, in June 1847, the epidemic again reached Astracan in the south-eastern part of Russia, and continuing over nearly the same route as in 1830, it reached Moscow in September 1847. In June 1848, the disease broke out in Berlin and appeared at Hamburg in September of the same year. Like the former epidemic it reached England very soon after its appearance in Hamburg. There were cases at Sunderland, Edinburgh, and London in England about the first of October 1848.

During the months of October and November 1848,

emigrant vessels from England and Germany to this country had more or less of the cholera during their passage, and on the second day of December there were cases of the disease in New York city. During the winter there was a considerable number of deaths from cholera in our southern and western cities. In January 1849, there were 80 fatal cases in one week in New Orleans, 17 in St. Louis, and some in Cincinnati. On the approach of warm weather, in 1849, the disease increased rapidly throughout the country, and particularly in the west and south. In the month of May the epidemic was very severe in those sections.

The epidemic appeared in Providence for the second time on the 27th day of May 1849, when a boy of six years died at the "old glass house" so called, on Eddy street. This was the first and only death in May.

During the month of June there were four deaths from cholera, viz: on the 8th and 11th in South Main street, and on the 29th in India and Worcester street.

In July there was only one death previous to the 20th. From the 20th of July to the end of the month there were 15 deaths, making 16 in all, in July. After the 20th of July the disease increased rapidly until about the 12th of August, when it began to decline. During the week ending August 11th, there were 24 deaths.

There were 90 deaths from Cholera during the month of August, 32 in September, 3 in October, and 4 in November, making the whole number 150, during the season.

Previous to the first of August, the disease did not seem to be epidemic in any particular locality; but the deaths occurred singly in all parts of the city. From the 1st to the 15th of August the disease was epidemic in Jail lane, Canal, Gaspee, and other streets near the canal, and was almost entirely confined to that locality. Nearly all the deaths in that locality from cholera, during the year, were between the first and fifteenth of August.

Between the 15th and 30th of August the greatest portion of the deaths occurred near the south end of South Main and Benefit streets, and in Linden (now Langley) street. From the 5th to the 15th of September, the principal severity of the disease was felt at the Horse Burying Ground in the north part of the city; and from the 16th to the 23d of September there were more deaths on India street than in any other locality.

The whole number of deaths from cholera, during the year, was as follows: On the east side 94; west side 56; total 150. Sex: Males, 80, Females, 70; Condition: Married, 76, Single, 63, Widows and Widowers, 11; Color: White, 139, Colored 11; Parentage: American, 51, Foreign, 99. The ages, and other particulars of those who died will be given in connection with the statistics of the epidemic of 1854.

The temperature of the atmosphere in Providence, during the entire summer of 1849, was higher than the average for a series of years, and though some portions of the season were quite dry, there were frequently slight showers, sufficient, with the great heat, to produce a rapid decomposition of vegetable and animal refuse.

It is impossible to ascertain exactly the number of cases of cholera in the city in 1849, as the records show only the deaths. The epidemic was more severe, and the number of deaths in proportion to the cases, was greater in 1849 than in 1851. Of about 50 cases, attended by the city physicians in 1849, two-thirds died. The

same ratio for the whole city would give 225, as the whole number of cases of the disease.

The approach and presence of the cholera in 1849, caused very little excitement in comparison with that of 1832, and the daily papers of the city at the later period give very little information respecting the epidemic. In 1832, these papers were filled with accounts of the disease, with absurd speculations respecting its nature and treatment, and with the names of persons who died in New York and other places.

In 1849, two or three lines daily from the Mayor of Providence, giving the number of cases and deaths, and daily telegrams from New York and other cities, stating the number of cases and deaths, comprise the greater portion of the information to be obtained from the daily journals. There was in Providence, no great excitement, and nothing approaching a panic. No attempt was made to prevent the disease by quarantine regulations, and no restrictions were placed upon the intercourse with other cities.

After the disease had appeared in the city, considerable efforts were made to remove filth and nuisances from localities where the disease existed; but these efforts were made too late, and were not sufficiently thorough to produce any apparent effect.

A national fast, with reference to the cholera, was appointed by President Taylor, which was faithfully observed in Providence on Friday, August 3, 1849. Of the propriety and expediency of public days of fasting, at least with reference to this disease, there are very serious doubts. There is hardly a disease known, which is more directly and unequivocally the result of the violation of physical laws, than the cholera; and, unless prayer and fasting are accompanied by works, we must confess a considerable want of faith in their efficacy for the prevention of this disease.

In some important respects, public days of fasting, and holidays are decidedly pernicious, during an epidemic. The class of persons most frequently the victims of cholera, being released from their daily labors on fast days, spend their time in dissipation, and it has been observed that such days, during an epidemic, are always followed by an increase of the disease. In the cholera hospitals in Boston, in 1849, the day previous to the national fast there were four admissions; the day following the number was fifteen.

In 1849, the cholera increased rapidly in this city, immediately after the national fast day. If the whole population had spent the day in removing nuisances, and filth from their houses and yards, there is no doubt that the epidemic would have ceased at once, and many lives would have been saved.

The reply of Lord Palmerston to a request, that a day of fasting might be appointed with reference to the approach of the cholera in 1854, is particularly valuable on this point, and shows more common sense than is usually found among public men in relation to medical subjects. The following is an extract from his answer:

"Lord Palmerston would, therefore, suggest, that the best course which the people of this country can pursue, to deserve that the further progress of the cholera should be stayed, will be to employ the interval that will elapse between the present time and the beginning of next spring, in planning and executing measures by which those portions of their towns and cities which are inhabited by the poorer classes, * * * may be freed from those causes and sources of contagion which, if allowed to remain, will infallibly breed pestilence and be fruitful in death, in spite of all the prayers and fastings of a united, but inactive nation."

The epidemic of 1849 added much to our knowledge in relation to the causes of the disease, and the measures necessary for its prevention; and showed, in a manner which the most obtuse could not mistake, the direct connection between cholera, and filth of persons and of estates.

The registration of deaths at that period, though imperfect, furnishes much valuable information on this subject. To this registration, and to records kept, and an account published by Dr. Collins, I am indebted for the greater portion of the information obtained, in relation to the epidemic of 1849.

1854.

The mysterious atmospheric influence, so evidently the originating cause of Asiatic cholera, left the city in the autumn of 1849, and was not again present until the year 1854. The same local filth, and cause of disease and death, existed in 1850, and in the succeeding years, as in 1849; but this atmospheric influence being absent, they did not give rise to Asiatic cholera. There have been, on several occasions when Asiatic cholera was not in the country, single cases of disease and death with all the symptoms of cholera. These may have been sporadic cases of that disease, or they may have been aggravated cases of the common cholera morbus which we have, to a greater or less extent, every year.

Early in 1853, epidemic cholera reached Europe for the third time, travelling westward from India. In the summer of 1853, the disease prevailed on the Baltic sea, and in the ports of the German ocean. During the summer of this year (1853) there were a few cases of cholera in London, and in September there was a severe outbreak of the disease at Newcastle-on-Tyne. At the same time, it became slightly epidemic in London; but the principal epidemic, in England, was not until the summer of 1854.

In November and December, 1853, emigrant vessels from different ports in Europe, lost many passengers from cholera, on their passage to this country. Many of these vessels came from ports where no cholera existed at the time of their departure, and it was noticed as a curious circumstance, that the choleric atmosphere seemed to be present in veins or distinct currents on the Atlantic ocean. On reaching a particular longitude the disease would break out on board the vessels, and prevail severely for a few days, and then entirely disappear. This was noticed particularly on vessels bound to New York and New Orleans. The disease appeared in New Orleans in November, 1853, and during the week ending December 5th, there were 214 deaths from cholera in that city.

The epidemic, having thus given unmistakable warning of its approach, remained comparatively dormant during the winter, though it did not entirely abandon our southern and western cities.

In accordance with the general expectation, the disease increased rapidly in this country, on the approach of warm weather, in the spring of 1854.

The first deaths from cholera, in Providence, were on the 16th day of May, 1854, eleven days earlier than in 1849. On that day, two persons died in Jail lane, which place was one of the principal foci of the disease in 1849. Another person died in the same place on the 20th, and another on the 23rd of May.

On the 21st of May, a woman died in a filthy locality called the "Garden of Eden," on North Main street, near Jenkins street; and on the 22d and 23d, two more

band and son died in the same place. This woman had washed the clothing of those who died in Jail lane, on the 16th.

On the 30th of May, two more persons, a mother and son, died in the same place on North Main street, making nine deaths in the city, from cholera, during the month of May.

During the month of June, there were 8 deaths in the city, from this disease, viz: on the 8, 11, 12, 14, 16, 18, 21, and 30th. These were all in Gaspee street, except the last two, one of which was in Benefit street, the other in Ives street.

There were no deaths in the city, from cholera, from the first to the 20th of July. Between the 21st and the 30th of July there were fourteen deaths, five of which were near the south end of South Main street. The remainder were single cases in different localities.

After the first of August, the number of cases rapidly increased, and the disease seemed to concentrate upon particular localities. Between the first and fifteenth of August inclusive, there were 64 deaths, 43 of which were in the section of the city bordering upon the canal, including Gaspee, State, Smith, Back, Charles, and other streets, and Railroad Place. This locality suffered more from the disease, in 1854, than any other in the city; but, after the fifteenth of August, there was hardly a case there. The disease seemed to have swept through the place, and then abandoned it almost entirely.

From the 16th to the 31st of August, there were 45 deaths, of which 23 were in the neighborhood of India street, and Fox Point Hill. The remainder were not concentrated in any particular locality, though there were several in Buter's yard on North Main street, and a few in Eddy street. The whole number of deaths from Cholera, during the month of August, was 109.

In the month of September, there were 19 deaths, ten of which were on the east side of the river, south of Williams street; but they were not confined to any particular locality. The last death from Cholera, in 1854, was on the 29th day of September, and the whole number, during the year, was 159.

The greatest number of deaths in any consecutive seven days, was during the week ending August 12th, in which 42 persons died. The greatest number in one day, was on the 12th of August, when 9 died.

There were 140 deaths on the east side of the river, and only 19 on the west side. In one case the residence was not stated.

The parentage of those who died was as follows:—American, 14; Irish, 123; English, 12; Scotch, 1; New Zealander, 1; Not stated, 5—Total, 159.

From the commencement to the end of the disease, there were 137 days, and, during this time, there were deaths from cholera on 66 different days.

The following table shows the principal statistics of the cholera, in the city, at the two periods, 1849, and 1854.

	1849	1854	Total
First death from Cholera.....	May 27	May 16	
Last death from Cholera.....	Nov. 16	Sept. 29	
Number days from first to last.....	173	137	
Estimated cases of the disease.....	225	318	543
Whole number of deaths from cholera.....	150	149	299
Number of deaths in May.....	4	9	13
" " June.....	4	8	12
Number deaths from July 1st to 20th.....	1	0	1
" " " 20th to 31st.....	15	14	29
Week ending August 7th.....	20	24	44
" " 14th.....	26	19	65
" " 21st.....	17	20	37
" " 28th.....	19	19	38

" September 4th.....	18	14	32
" " 11th.....	7	5	12
" " 18th.....	10	3	13
" " 25th.....	5	3	8
From Sept. 26th to 30th, inclusive.....	3	1	4
Deaths in October.....	3	0	3
" November.....	4	0	4
Whole number.....	150	149	299
SEX.			
Males.....	80	86	166
Females.....	70	73	143
COLOR.			
White.....	139	159	298
Colored.....	11	0	11
CONDITION.			
Single.....	63	62	125
Married.....	76	82	158
Widows and Widowers.....	11	15	26
PARENTAGE.			
American.....	51	11	65
Foreign.....	99	140	239
Unknown.....	0	6	6
LOCALITY.			
East side.....	94	140	234
West side.....	56	18	74
Not stated.....	0	1	1
AGES.			
Under 5 years.....	14	20	34
5 and under 10.....	6	12	18
10 " 20.....	4	6	10
20 " 30.....	31	34	65
30 " 40.....	34	31	65
40 " 50.....	27	23	49
50 " 60.....	16	14	30
60 " 70.....	14	9	23
70 " 80.....	4	0	4
Age not given.....	0	1	1
Average age, 1849, 34 years, 3 months; 1854, 32 years, 3 months.			

The number of cases of Cholera, in the city, in 1854, was considerably greater than in 1849; but the disease seemed to be of a milder type, and the proportion of recoveries was larger. It is estimated that, in 1854, about one half of the cases died, while in 1849, about two thirds died.

The weather, during the summer of 1854, was slightly warmer than the average, in this city; but it did not seem to be so oppressively hot as in the summer of 1849.

The direction of the wind, on the days in which deaths occurred from cholera, was as follows:—from the south-west, south, or south-east, 41 days; from the north-west, north, or north-east, 23 days; from the east, one day, and from the west, one day.

The appearance of the disease, in 1854, caused no excitement whatever; no quarantine regulations were enforced, and no measures were taken, before its appearance, to prepare for it. After the disease had commenced, the city authorities, as in 1849, endeavored to prevent its spread, by the removal of filth, and nuisances from the worst localities, and in this respect they acted energetically; but, as in 1849, these efforts were made too late to produce the desired result.

The daily papers, in 1854, give no information of any value, in relation to the disease. The Journal did not mention the existence of the disease in the city, until the last of July, when there had already been some 25 deaths. The difference between the newspapers of 1852 and 1854, in this respect is remarkable. The Providence papers of 1852, would furnish almost a complete history of the epidemic not only in this city, but also throughout the country. The introduction of the electric telegraph, and the more rapid and frequent intercourse with other portions of our country and of the world, by condensing the statements of facts, and by multiplying the objects of interest, have entirely changed the character of newspapers, and have, to a great extent,

rendered them worthless as sources of minute and accurate statistical information.

The registration of deaths was much more full and accurate, in 1854, than in 1849, and furnishes much important information. The city authorities also, in 1854, attempted to obtain full particulars of all cases of cholera. By direction of the Mayor, blanks were prepared and furnished to all the physicians, requesting them to report fully in relation to the causes, character, and treatment of all cases, in the city, which might come within their knowledge. The information obtained was important, and fully confirmed the opinions generally entertained, of the intimate connection between cholera, and filth. An analysis of these facts, showing, particularly, their relation to the sanitary condition and wants of the city, was published, by order of the City Council, in the daily papers, and also in pamphlet form.

Perhaps the two most prominent, and important facts obtained, in relation to the cholera epidemic of 1854, were the following:

1. That nine-tenths of all those who died were persons of foreign parentage; and
2. That seven-tenths of the whole number of deaths occurred in two comparatively restricted localities, viz: near the canal, and on and near Fox Point Hill. There were 111 deaths in those two localities, leaving only 48 in all other parts of the city.

The fact that nine-tenths of the deaths from cholera occurred in a class of persons, comprising only a little more than one-third of the population of the city, was well calculated to excite attention and enquiry. The causes of this enormous excess of mortality from this disease, among the foreign population, are not hidden; they are apparent to all. They are, *first*, the character of the tenements in which this class of our population lives; and, *second*, their habits of life.

There can be no mistake on this point. Facts, figures, and common sense prove it to be true, and the same facts and figures prove, that the same miserable, unsuitable, ill-constructed, over-crowded tenements, with no conveniences for cleanliness, or decency; and the same habits of life, among this class of our population, are, every year, the direct causes of a large number of deaths in this city. With such facts, from which there is no escape, it is not difficult to place the responsibility for this loss of human life where it belongs.

But this same class of persons, with the same habits, and dwelling in equally unsuitable tenements, was numerous in very many places in the city, where hardly a case of cholera occurred. How, then, shall we account for the second fact; that seven-tenths of all the deaths from cholera were in two restricted localities? We must, of course, seek for the explanation in some local causes, connected with those localities, which did not exist in other parts of the city.

What were those local causes? I examined this question with considerable care, in 1854, and have since carefully reviewed it, and find it impossible to come to any other conclusion than that stated in my report, at that time, which was this: That the principal cause of the severity of the epidemic, in Gaspee, and other streets near the canal, was the filthy condition of the canal itself. It should also be noticed that the locality, near Gaspee street, where the cholera prevailed most severely, is partially surrounded by higher land, and is very unfavorably situated for free ventilation.

With regard to the epidemic about Fox Point Hill,

I could find no local cause, more than existed in other places, except the numerous hog pens with which the hill was covered at that time. The nuisance from this source was much greater than could be believed by any one who was not familiar with the locality. The earth, air, and water, on that hill, were saturated with filth from this cause, and, even to the present time, offensive evidences of this filth are found there.

In both localities, where the cholera prevailed so severely, the soil is a porous sand, and there are no sewers. The wells, therefore, act as drains, and receive all the filth of the neighborhood. It has been supposed, by high authority, that the cholera is propagated, almost wholly, through the water which is used by the inhabitants, and the voluminous reports of the English Board of Health in relation to this subject, seem to give considerable importance to this opinion. Perhaps an examination of the well water about Gaspee street and Fox Point Hill, might give us some new ideas in relation to the causes of cholera there.

But though these two localities suffered most severely from the cholera, in 1854, other portions of the city did not escape the severe, and fatal effects of the epidemic influence which was present, in the atmosphere, from May to October. Diarrhoea, and other similar diseases, were unusually prevalent during the entire season.—During the months of July, August and September, there were 142 deaths from cholera, in the city; but, during the same time, there were 181 deaths from diarrhoea, cholera morbus, dysentery, and cholera infantum. These deaths were not, generally, in the same localities, in which the cholera prevailed; but they were, like the deaths from cholera, generally connected with local nuisances and imprudence.

In examining this subject, we arrive at the conclusion, that three distinct causes of sickness and death, were present in the city, during the summer of 1854. These causes and their effects, may be thus briefly stated.

The first cause of sickness was the epidemic influence existing in the atmosphere, and which pervaded the entire city. Its effects were, an unusual prevalence of diarrhoea, in all parts of the city.

The second cause of sickness was personal filth, and filth in houses, and in yards. This cause, added to the first, produced an unusual number of fatal cases of diarrhoea, dysentery, cholera morbus, and cholera infantum, in all parts of the city, where the cause existed.

The third cause of sickness was the filth; canal, in one locality, and the hog pens, in another. This cause, added to the two preceding, produced the greater portion of the cases of Asiatic cholera.

It was not possible, in that particular season, for either of these causes alone, or for either two of them, to have produced any great amount of Asiatic cholera; but the combined action of all three causes, was necessary to produce the most of the cases that did occur in this city.

Such are some of the facts relating to Asiatic cholera and its causes in this city. Let us look at some of the lessons which these facts teach us.

The first lesson is the importance of preventive or sanitary measures.

There is hardly any disease, the causes of which are better known, or which are more completely within the control of man. Look at the record of the appearance, of the disease, in the city of Providence. It has always a given warning of its approach, and has given abundant time to prepare for it. Look at this season's

of the disease, in the city, and see its direct connection with filth and local nuisances. Should it appear again, we can point out, months beforehand, the localities, and houses in which its greatest severity would be felt, and almost the individuals who would be its victims. It obtains its support, almost entirely, from causes which it is in the power of individuals, or of the city authorities to remove.

The extensive prevalence of Asiatic cholera, then, in any civilized community is a disgrace to that community. If it prevails, to any great extent, it must be from gross neglect or imprudence on the part of individuals;—from gross deficiencies in the laws and sanitary arrangements of the community; or from gross neglect in the execution of the laws. When the epidemic influence is present, there will be some cases of cholera from imprudence, on the part of individuals; but without gross neglect it *can never* become epidemic and destroy a large number of persons.

A second lesson, which is taught us by the history of cholera, is, the importance of a complete registration of all the particulars, relating to those who die in a community.

Twenty five years since, we knew almost nothing in relation to cholera. At the present time, there is no disease of which the causes, means of prevention, symptoms, and progress are better understood. This knowledge has been reached by a full and minute record of facts, and by a careful comparison and analysis of these facts. The same careful observation, and records, will, in time, give us equally valuable knowledge in relation to other diseases, which are more important than cholera, and with which we have long been fa-

miliar; but concerning which we have no such minute records.

A third lesson, which is learned from the history of cholera, is, the importance, on the part of individuals, of prompt attention to the first symptoms of the disease. The disease is always preceded by a diarrhoea, of longer or shorter duration, and this, when attended to at its commencement, is easily controlled. There have been instances, in England, where epidemics of cholera have been out short by early and general treatment of the premonitory diarrhoea.

From one-half to two-thirds of those who neglect the premonitory symptoms have died in all epidemics of the disease, and there is no probability that the mortality will be less in future.

A fourth lesson, obtained from the history of this disease, is the entire inutility of quarantine or restrictive regulations, for its prevention.

The experience of this city would be sufficient to establish this point; but it is also confirmed by the experience of all other cities and countries. For the prevention of cholera we must depend upon internal sanitary measures. Every city, and every individual must put their own houses in order, or they must suffer the consequences.

But it is unnecessary to extend these remarks. My object in examining this subject, was to collect the facts in relation to the disease in our own city, hoping by an examination of the experience of the past, to be better prepared to meet the events of the future. To me, this examination has been of great interest and value; that it may be of some value to others, is my sincere desire.

*Read before the R.I. Historical
Society, Dec 30. 1857.*

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